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Vietnam : Dengue Fever

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Vietnam



Population \approx 95, 700, 000 people (WHO, 2017).

Ethnic Makeup: Kinh (Viet) 85.7%, Tay 1.9%, Thai 1.8%, Muong 1.5%, Khmer 1.5%, Mong 1.2%, Nung 1.1%, Hoa 1%, other 4.3% (Central Intelligence Agency, 2017).

Political Structure

- Vietnam is a socialist country under the leadership of the Vietnam Communist Party (Vietnam Embassy-USA, 2017).
- The National Assembly, which includes 498 members, has constitutional and legislative power and elects the President of the State and Prime Minister (Vietnam Embassy-USA, 2017).

Major Challenges

1. Internal Challenges

- Large gap in the health status between regions of the country and between different populations (WHO, 2017). This results in varying prevalence of dengue fever and treatment available.
- Unrelated to dengue fever, Vietnam also struggles with determining the amount of government involvement in the economy and sustaining a multilateral foreign policy (Vu, 2015).

2. External Challenges

- In 2014, China's Haiyang Shiyu 981 drilling platform placed an oil rig in territorial waters (Ives, 2016).
- This sparked other investigations involving unannounced, state-sponsored Chinese flights through Vietnamese-administered airspace and destruction of a shipping vessels (Ives, 2016).

Dengue Fever in Vietnam

- Dengue fever is a mosquito-borne viral disease which is a leading cause of illness and death in tropical and subtropical countries (Lee, Nguyen-Viet, Nam, Lee, Won, Duc, & Grace, 2017).
- Dengue fever is becoming a public health problem—especially in Vietnam—due to climate changes (temperature, precipitation, humidity) significant impact on vector populations (Lee et al., 2017).
- Vietnam has the highest number of dengue fever cases in the Western Pacific region (Lee et al., 2017).
- In 2016, there were approximately 110,000 cases of dengue fever and 40 deaths reported (Herriman, 2017).
- The cost of this treatment for 2015 totaled approximately 37,700 USD per patient (Vo, Phan, & Vo, 2017).

Epidemiology

- Frequency:
 - Increased incidence rates were observed in the second half of each year—from May to December (Lee et al., 2017).
 - Sudden peaks in each province were assumed to be related to emergence of stereotypes or drop in herd immunity (Lee et al., 2017).
- Most affected groups:
 - Peri-urban/rural areas \rightarrow poorly sanitized living conditions (Lee et al., 2017).
- Risk factors:
 - Not receiving adequate treatment in a timely manner (Vo et al., 2017).
 - Lack of reliable water supply (Lee et al., 2017).

- Stagnant water and substandard sanitary and hygiene practices → breeding ground for vectors (Lee et al., 2017).

Identification

- Dengue-related signs include flu-like symptoms, a severe headache, and joint and muscle soreness (Vo et al., 2017).
- To diagnose patients, doctors use a blood test to check for the virus or antibodies associated with dengue fever (WebMD).

Intervention

- Vietnam developed a National Dengue Control Programme (NDCP) in 1999 to pilot several models for community-based vector control (WHO, 2017):
 - Use of Mesocyclops in water containers to eat larvae (WHO, 2017).
 - Provide guppy fish to school children who then place the guppies in water containers at home to eat larvae (WHO, 2017).
 - Establishment of dengue collaborator networks in hyper-endemic communities (WHO, 2017).

Challenges

- Lack of quality public health insurance available to cover the cost of diagnosis and treatment (Vo et al., 2017).
- The lower income communities are the most affected population but they are also the ones who cannot afford the high cost of treatment (Vo et al., 2017).
- The climate change is inducing prime breeding grounds for the vectors (Lee et al., 2017).
- The symptoms can sometimes be mistaken for the flu (Vo et al., 2017).

Suggestions

- Educate the low income communities about the threat of dengue fever and how to avoid the vectors (don't leave water outside, practice sanitation, etc.).
- Increase access to clean and safe water sources in lower income areas.
- Push for public aid to cover the cost of dengue fever treatment.
- Encourage doctors to test for dengue fever if the patient is presenting severe flu-like symptoms and not improving.

References

- East and Southeast Asia: Vietnam [Central Intelligence Agency]. (2017). *The world factbook: Vietnam*. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/vn.html>.
- Herriman, R. (2017, Jan 08). Vietnam dengue cases top 110,000 in 2016, up nearly 40 percent. *Outbreak News Today*. Retrieved from <http://outbreaknewstoday.com/vietnam-dengue-cases-top-110000-2016-nearly-40-percent-20687/>.
- Ives, M. (2016, Jan 20). Vietnam objects to Chinese oil rig in disputed waters. *The New York Times*. Retrieved from <https://www.nytimes.com/2016/01/21/world/asia/south-china-sea-vietnam-china.html>.
- Lee, H. S., Nguyen-Viet, H., Nam, V. S., Lee, M., Won, Sungho., Duc, P. P., & Grace, D. (2017). Seasonal patterns of dengue fever and associated climate factors in 4 provinces in Vietnam from 1994 to 2013. *BMC Infectious Diseases*, 17(218), 1-9.
- Viet Nam [World Health Organization]. (2017). *Statistics and country profile*. Retrieved from <http://www.who.int/countries/vnm/en/>.
- Vietnam Embassy-USA. (2017). Government Structure. Retrieved from <http://vietnamembassy-usa.org/vietnam/politics/government-structure>.
- Vo, N. T. T., Phan T. N. D., & Vo, T. Q. (2017). Direct medical costs of dengue fever in Vietnam: a retrospective study in a tertiary hospital. *Malays J of Med Sci*, 24(3), 66-72.
- Vu, T. M. (2015, Feb 01). 2015 challenges for the Communist Party of Vietnam. *The Diplomat*. Retrieved from <https://thediplomat.com/2015/02/2015-challenges-for-the-communist-party-of-vietnam/>.
- WebMD. *Dengue Fever*. Retrieved from <https://www.webmd.com/a-to-z-guides/dengue-fever-reference#1>.
- Western Pacific Region [World Health Organization]. (2017). *Dengue fever*. Retrieved from <http://www.wpro.who.int/vietnam/topics/dengue/factsheet/en/>.